tively. QALYs were significantly lower for the most sedentary (Q1) group relative to the two least sedentary groups (Q3 and Q4) adjusted for age, gender, and BMI. Furthermore, for average overweight women age 65, every additional hour spent in sedentary behavior was associated with greater decreases in median QALYs for those who were more sedentary than those who were less sedentary (Q1: -0.049, 95%CI: -0.074, -0.025; Q2: -0.058, 95% CI: -0.135,0.019; Q3: -0.031, 95% CI: -0.092,0.030; Q4: 0.01, 95% CI: -0.006,0.032). **CONCLUSIONS:** Persons in the most sedentary group suffered the greatest QALY losses. Study results support interventions targeting the most sedentary persons in reducing this behavior.

MUSCULAR-SKELETAL DISORDERS – Cost Studies

PMS25
VALIDATION OF A BUDGET IMPACT MODEL FOR USE OF DENOSUMAB IN POSTMENOPAUSAL WOMEN WITH OSTEOPOROSIS

Mehta D[1], Stolshek B[2], Agodoa I[2]
[1]*Clinical Pharmacy and Pharmaceutical Economics & Policy, Leonard D. Schaeffer Center for Health Policy and Economics, School of Pharmacy, University of Southern California, USA, Los Angeles, CA, USA,* [2]*Amgen Inc., Thousand Oaks, CA, USA*

OBJECTIVES: To assess the validity of a previously published, updated denosumab budget impact model (BIM), evaluating the budgetary impact to a hypothetical US health plan of increased utilization of denosumab in postmenopausal women with osteoporosis at high risk of fracture. **METHODS:** The BIM was evaluated using face validity, internal validity and cross validity tests. Face validity of the model was assessed by comparing the underlying Markov model with prior published osteoporosis cost-effectiveness studies and osteoporosis reference model. Internal validity was assessed using: 1) extreme value analyses on input parameters; and 2) two-way sensitivity analyses by simultaneously varying the market share, price of denosumab, and direct medical costs of fractures. Cross validity tests were conducted on the following input parameters: population parameters, treatment persistence rate and direct medical costs of fractures. **RESULTS:** In a base case analysis, increasing utilization of denosumab up to 19.6% of eligible patients in year 3 compared with a constant 16% in years 1 through 3, resulted in a net per-member-per-month (PMPM) of < $0.0025 in each year. The use of a well-validated osteoporosis Markov model with health states aligned with osteoporosis reference model suggests face validity for the BIM. The results of the BIM model varied in expected directions in internal validity tests: extreme value analysis showed the model was sensitive to the proportion of population currently or newly treated with osteoporosis medication. In the two-way sensitivity analyses, the PMPM increased with increases in price and market share of denosumab. The input parameters used in the model fell within the ranges published in literature, thus providing cross validity. **CONCLUSIONS:** The current study showed that the denosumab BIM is well validated and can serve as a useful tool to assess the potential impact to a US health plan's budget of increased denosumab utilization in postmenopausal osteoporosis.

PMS26
BUDGET IMPACT ANALYSIS OF BOTULINUM TOXIN A THERAPY FOR UPPER LIMB SPASTICITY IN HONG KONG

Dinet J[1], Nai Mo LAM E[2], Gabriel S[3]
[1]*Ipsen Pharma, Boulogne-Billancourt, France,* [2]*Beaufour Ipsen Tianjin Pharmaceutical Co, TIANJIN, China,* [3]*IPSEN Pharma, Boulogne Billancourt, France*

OBJECTIVES: Upper limb spasticity (ULS) secondary to stroke has a considerable patient and caregiver burden, particularly with regards to pain, activities of daily living and mobility. Botulinum neurotoxin-A (BoNT-A) injections are effective in treating ULS. We aimed to calculate annual cost per-patient basis and the expected overall annual budget impact in Hong Kong using static and dynamic market share scenarios. **METHODS:** A budget impact model for BoNT-A use, adopting a Hong Kong healthcare system perspective, was developed. Two market-share scenarios were modelled over 5 years. While the static scenario assumed current market shares (abobotulinumtoxinA, 24%; onabotulinumtoxinA, 76%) to remain constant over time, the dynamic scenario assumed market share of abobotulinumtoxinA to rise up to 65% across 5 years. Epidemiologic data inputs were sourced from the most recently published literature, unit costs for BoNT-As, healthcare resources use from physicians working in Hong Kong, and market share assumptions from IMS Health (Market Sizing). Equivalence of the 2 BoNTAs in terms of efficacy and safety is assumed but the units of abobotulinumtoxinA are specific to the preparation and are not interchangeable with other preparations of botulinum toxin. **RESULTS:** Annual cost per ULS patient were 59 907 HKD, and 76 888 HKD respectively, with prescribing patterns following SmPC recommendations for abobotulinumtoxinA and onabotulinumtoxinA. The annual budget impact was decreased by between 28 731 553 HKD in year 2 and 111 142 610 HKD in year 5 by shifting the market share to abobotulinumtoxinA. Sensitivity analyses showed that time to re-injection, and dose per injection for both toxins were the most influential parameters on budget impact, impacting both drug acquisition costs and physician visits. **CONCLUSIONS:** Increased use of abobotulinumtoxinA relative to onabotulinumtoxinA could potentially reduce the total cost of treating ULS patients in Hong Kong.

PMS27
BUDGET IMPACT ANALYSIS OF THE INCLUSION OF TOFACITINIB IN THE PUBLIC LIST OF REIMBURSEMENT IN THE TREATMENT OF RHEUMATOID ARTHRITIS AFTER INADEQUATE RESPONSE TO METHOTREXATE IN COLOMBIA

Vargas-Valencia J[1], Prieto VA[2], Jáuregui E[3], Fernandez-Avila D[4], Chalem-Choueka MR[5], Vasquez G[6]
[1]*Econopharma Consulting, Cuernavaca, Mexico,* [2]*Pfizer SAS, Bogota, Colombia,* [3]*Riesgo de Fractura, Bogota, Colombia,* [4]*Hospital Universitario San Ignacio, Bogota, Colombia,* [5]*Universidad del Bosque, Bogota, Colombia,* [6]*Universidad de Antioquia, Medellin, Colombia*

OBJECTIVES: Tofacitinib is an oral small molecule Janus kinase inhibitor for the treatment of moderate to severe rheumatoid arthritis (RA) in adults who have an inadequate response to methotrexate. The aim of this work is to estimate the budget impact of the inclusion of tofacitinib in the public list of reimbursement in Colombia. **METHODS:** A model was built with a time horizon of three years. The comparators were:abatacept, adalimumab, certolizumab, etanercept, infliximab, golimumab, rituximab, tocilizumab, and tofacitinib. The perspective was of the Colombian health system including only direct costs: drug costs and administration costs. All currency units were in USD $ (1 USD$ = COP 1,971). A 5% discount rate was used. The number of expected cases was calculated from the single national register of members of the Colombian health system (BDUA). Additionally a prevalence of 0.52% was used and we assumed that 30% of patients were refractory to initial treatment with non-biologic DMARDs. The costs of drugs were used current price regulation and the official database of purchase and sale of drugs (SISMED). The market share was estimated based on SISMED and the projected demand validated by expert physician. **RESULTS:** As the use of tofacitinib is increased from 0.9% (current scenario) to 15.3% (projected for three years) total spending is reduced in USD $ 80,345,510 equivalent to 5% of total expenditure of this pathology in Colombia. **CONCLUSIONS:** The use of tofacitinib in patients who have an inadequate response to methotrexate, decreases total costs of care for the health system in Colombia.

PMS28
BUDGET IMPACT ANALYSIS OF BOTULINIUM TOXIN TYPE A IN TREATMENT OF POST-STROKE SPASTICITY IN THE RUSSIAN FEDERATION

Yagudina R, Kulikov A, Ugrekhelidze D
I.M. Sechenov First Moscow State Medical University, Moscow, Russia

OBJECTIVES: To conduct budget impact analysis of abobotulinumtoxinA, onabotulinumtoxinA, incobotulinumtoxinA in patients with post-stroke spasticity in Russia for 1-year period. Physical therapy was used in all therapy schemes. **METHODS:** A budget impact model was developed in Excel 2013 to simulate the costs of abobotulinumtoxinA, onabotulinumtoxinA, incobotulinumtoxinA. The total number of patients in Russian Federation is 287,334. According to the performed modeling using up-to-date epidemiological data only 212,126 people survive by the 1st year of therapy. The following costs were taken into account:, the costs of pharmacotherapy, costs of inpatient and outpatient care in the Russian Federation, costs of adverse events, disability pensions, GDP loss due to post-stroke spasticity (PPS). Costs of pharmacotherapy were taken from the essential drug list and the database of drugs prices. Standard of treatment of stroke consequences developed by Ministry of Health of the Russian Federation was used for calculation of medical care costs. Costs of adverse events were calculated basing on Russian clinical guidelines and database of drugs prices. Disability pensions were taken from Russian Pension Fund database. GDP loss was based on the GDP information from World Bank. For reference, accepted exchange rate was 1 US$ = 60,29 RUB. **RESULTS:** AbobotulinumtoxinA treatment in whole population of PPS patients in Russia will result in US$ 185,07 million economy for 1 year compared with onabotulinumtoxinA, US$ 183,13 million economy compared with IncobotulinumtoxinA and will result in US$ 756 economy for 1 year compared with onabotulinumtoxinA, US$ 737 economy compared with incobotulinumtoxinA per one patient. This cost reduction is mainly attributed to decrease of GDP loss, disability pensions due to the better efficacy of this BTA drug. **CONCLUSIONS:** Inclusion of abobotulinumtoxinA therapy is the most cost saving treatment option in the management of post-stroke spasticity in Russia compared with other BTA medications.

PMS29
RECENT COST TRENDS AMONG PATIENTS USING BIOLOGIC AGENTS FOR THE TREATMENT OF PSORIATIC ARTHRITIS

Kuznik A[1], Eslava S[2], Cai J[3]
[1]*Celgene Corporation, Warren, NJ, USA,* [2]*Celgene Corporation, Berkeley Heights, NJ, USA,* [3]*Celgene Corporation, Summit, NJ, USA*

OBJECTIVES: A number of therapeutic classes are available to treat psoriatic arthritis (PsA), including biologic drugs. Although the wholesale acquisition cost of biologic drugs has increased in recent years, there is little published evidence documenting cost trends from the US perspective. The objective of this study was to assess cost trends for patients using biologic therapy for PsA from the US perspective. **METHODS:** Continuously enrolled adult patients with ≥2 outpatient diagnoses of PsA were selected from the MarketScan databases if their first biologic prescription date (index date) occurred between July 1, 2008, and July 31, 2013. Patients were included in the study if (1) full access was available to all medical and pharmacy claims for ≥6 months before and ≥12 months after their index date, and (2) they were biologic-naïve before index. Healthcare costs were assessed from the payer perspective and based on annual reimbursed amounts. Results were stratified by all-cause vs. PsA-related costs and within these 2 categories further subdivided into medical inpatient, medical outpatient, emergency room, and pharmacy costs. **RESULTS:** In total, 25,565 patients met the inclusion criteria. All-cause healthcare costs in the 6 annual cohorts increased by 53.1% between 2008 and 2013, with an average annual increase of 10.6% (or $2,867). PsA-related annual costs were estimated to increase by 63.6%, with an average annual increase of 12.7% (or $2,335). Although cost increases in all categories of interest were observed over time, the major driver of the observed trends was the PsA-related pharmacy costs, predominantly the cost of biologic therapy, with an estimated increase of 65.6% and an average annual increase of 13.1% (or $2,220). **CONCLUSIONS:** For US managed care payers, total healthcare costs among patients initiated on biologic therapy for PsA has increased by 53.1%, which is mostly driven by the 65.6% change in PsA-related pharmacy costs.

PMS30
MODELING OF SOCIETAL COSTS UNDER DIFFERENT TREATMENT SCHEMES OF POST-STROKE SPASTICITY IN THE RUSSIAN FEDERATION

Yagudina R, Kulikov A, Ugrekhelidze D
I.M. Sechenov First Moscow State Medical University, Moscow, Russia